



State of Alaska  
 Department of Natural Resources  
 Division of Geological & Geophysical Surveys

Progress Report: Systematic Approach to Assessing the Vulnerability of Alaska's Coastal Infrastructure to Erosion

Date: January 30, 2020

Period of Reporting: October 1-December 31, 2019

Submitted to: Denali Commission

### Objectives and Milestones

Objectives	Year 1			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Project kickoff, account setup at State of Alaska, and staff hiring		X		
Establish data agreements for infrastructure file datasets			X	X
Provide initial assessment at pilot sites (Locations: Alakanuk and Kipnuk)				X
	Year 2			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Publish initial shoreline change assessment as DGGs report of investigations	X			
Provide draft final product to Denali Commission and designated stakeholders for feedback (Locations: Nunam Iqua and Kotlik)	X			
Project shorelines and build infrastructure projection geodatabases and map products		X	X	X

(2000) character limit

Progress during this period consisted of establishing data agreements for additional infrastructure files, finalizing the Digital Shoreline Analysis System (DSAS) analysis for additional Bristol Bay community data (in conjunction with Bureau of Indian Affairs project), and adding Bristol Bay and North Slope communities to the initial shoreline change assessment with map products.

Additional infrastructure files were transferred to DGGs from DCRA and existing files were augmented by hand-delineating infrastructure that was visible from high resolution orthoimagery (as seen on 2015-16 datasets). These files have been completed for 35 communities.

Within the initial shoreline change assessment, maximum rates of shoreline change will be reported for 47 communities from Kaktovik to Port Heiden, along the coast, and initial map products have been

completed for 43 communities. Historical and recent aerial orthoimagery, that have not been delivered yet, will be utilized to create map products for the remaining 4 communities, upon delivery and to expand the initial assessment to 2 additional Bristol Bay communities (49 communities total). The initial assessment (covering the 47 communities) will be released as a DGGs report of investigations which is in review and expected for publication before March 2020.

Moving forward, additional project progress will be made on projecting shoreline change onto infrastructure data files and providing draft products to the Denali Commission. DGGs has hired a Geologist II to assist the Geologist I, undergraduate intern, and graduate intern with the project. All DGGs staff will assist with travelling field projects (not this project) during the summer of 2020, which will inhibit work activities during that time, but will not impact the project timeline.

### **Budget Summary**

No changes. On track.

### **Expenditures:**

Total this quarter \$26,048.73

Den. Com. \$23,284.88

Match \$2,763.85